

NAVAL WEAPONS STATION (WPNSTA), SEAL BEACH  
RESTORATION ADVISORY BOARD (RAB)  
AND COMMUNITY MEETING  
SITE TOUR  
JUNE 9, 1999

Participants:

Bettencourt, Philip  
Bradley, John/U.S. Fish and Wildlife Service (USFWS)  
Dick, Andrew/SWDIV  
Lamond, Robert  
Leibel, Katherine/Department of Toxic Substances Control  
(DTSC)  
Mingay, Marsha/DTSC  
Nguyen, Dien/Orange County Environmental Health  
Reese, Kirsten/CH2M HILL  
Schmitt, Mike  
Scott, Kathy  
Smith, Gregg/WPNSTA Seal Beach  
Simpson, Frank/DTSC  
Tamashiro, Pei-Fen/WPNSTA Seal Beach  
Theriault, John  
Unrath, John  
Voce, Mario/Restoration Advisory Board (RAB) Community  
Co-chair  
Wong, Bryant/CH2M HILL

WELCOME

At 6:10 p.m., P. Tamashiro welcomed the participants to WPNSTA Seal Beach Installation Restoration (IR) sites tour. She introduced B. Wong from CH2M HILL who would be conducting the tour and giving a brief overview of each site. Gregg Smith, WPNSTA Seal Beach, Public Affairs Officer was also introduced.

B.Wong covered the itinerary for the evening. The sites would be visited in the following order:

- Site 5 - Clean Fill Disposal Area
- Site 14 - Former Underground Fuel Storage Tanks
- Site 40 - Concrete Pit/Gravel Area
- Site 70 - Research, Testing, and Evaluation Area
- SWMU 24 - Stationary Demilitarization Furnace Facility
- Site 1 - Wastewater Settling Pond
- Old Skeet Range (OSR)
- Site 6 - Explosives Burning Ground
- Site 7 - Station Landfill

- Site 4 - Oil on Roads

A site map showing the locations of Sites 1, 4, 5, 6, 7, 14, 40, 70, SWMU 24, and OSR was provided as a handout to the participants of the site tour. A table summarizing the IR sites to be visited was also provided. Questions and answers discussed during the site tour are summarized below:

#### SITE TOUR

##### Site 5 - Clean Fill Disposal Area

Question: Are there bullets buried here?

Answer: Small caliber bullets have been recovered at Site 5.

Question: Would the arms have gone off if not removed?

Answer: Probably not. However, the Navy wanted to remove them with the small chance that they could have done some harm.

Question: Is the wildlife refuge owned by the United States Fish and Wildlife Service (USFWS)?

Answer: No, the land that comprises the Seal Beach National Wildlife Refuge (NWR) is owned by the Navy, but the USFWS is designated as the refuge manager.

Question: Is there a contract between the two (USFWS and U.S. Navy)?

Answer: There is a Memorandum of Understanding (MOU) between the USFWS and the Navy that governs the jurisdiction of the Seal Beach NWR.

Question: Is there a situation or agreement of this type at Camp Pendleton?

Answer: No, the USFWS does not have an MOU with the Navy at Camp Pendleton. Camp Pendleton does not have a designated national wildlife refuge.

Question: Is the primary investigation effort directed toward the ordnance at Site 5?

Answer: The presence of the bullets is not the only concern. Because of its use as a "dump", there is the concern that other types of wastes may have

been disposed of at Site 5 that may endanger the biological resources of the NWR.

Question: Metals and such?

Answer: Yes, although this location was primarily known as a "dump" for construction debris, there is the possibility that hazardous materials may have also been disposed of at Site 5 in the past. In the 1940s, 1950s, 1960s, and 1970s, people did not distinguish between construction debris and hazardous waste as most people do now. And, perhaps, some of these materials, if present, could leach chemicals that could harm people and the environment.

Question: Can it be assumed that 90 percent of the site is probably contaminant free?

Answer: Most of the known wastes disposed at Site 5 are clean fill. But the Navy is undertaking this investigation because of its concern for protection of biological species in the NWR.

Question: Have any contaminants been detected in water samples taken from the NWR?

Answer: No, nothing systemic has been detected.

#### Site 14 - Former Underground Fuel Storage Tanks

Question: Were the anaerobic organisms used in the bioremediation introduced?

Answer: They were already present (naturally occurring). They may have been fed certain nutrients to enhance growth.

Question: Are these the tanks that they plan to dig up and remove?

Answer: No, the Corrective Action Plan (CAP) for this site is still in the planning stages. The levels of contamination and plume size have yet to be established.

Question: Is the research on this site finished?

Answer: Yes, it was completed at the end of 1998.

Question: How do I go about getting a copy of the research report?

Answer: I do not know if they are available. We do not have copies ourselves.

Question: Were these tanks selected for research because they are leaking?

Answer: This site was selected for this type of research because the site's subsurface conditions contained the petroleum-contaminated groundwater plume in-place and prevented uncontrolled spreading.

Question: Has the base removed all of its underground storage tanks?

Answer: The base has either removed or upgraded all of its underground storage tanks. This was done to comply with the current underground storage tank requirements, which are the same requirements subjected to private industry.

Question: Were there three tanks? Did all three leak?

Answer: Yes, there were three tanks. We are not sure if they all leaked.

Question: The site looks graded. Are they planning to build something on this site?

Answer: No, before construction of any type occurs, the plans must go through the base Environmental Department for review. If construction is planned on a contaminated site, the construction at that location cannot proceed.

Question: Why is the site graded?

Answer: The site used to be a parking lot.

#### Site 40 - Concrete Pit/Gravel Area

Question: What are the measurements of the plume?

Answer: Approximately 250 feet wide from north to south and 450 feet long from east to west.

Question: What direction is the plume moving?

Answer: It is migrating very slowly eastward toward the NWR. However, due to the flat groundwater

gradient and the nature of the subsurface soil conditions, the plume is not expected to reach the NWR.

Question: If in 1995, the plume was estimated to be 270 feet long and in 1998 it was estimated to be 450 feet long, how do you know the plume hasn't grown larger?

Answer: An initial estimate made in 1995 was based on the results of a less intensive, less detailed study with fewer samples taken and only a rough estimate of contamination determined. With those limitations understood, a more intensive study was undertaken and completed in 1998. More groundwater samples were collected in all directions until non-detectable concentrations were attained.

Question: Is this building (Building 240) still being used for locomotive mechanical repair?

Answer: Yes.

Question: How is the waste disposed of now?

Answer: The drain which discharged waste oil and solvents to the north part of the building has been permanently capped, and these wastes are now collected and disposed or recycled properly.

Question: Is the waste disposed of at a waste oil disposal facility?

Answer: Yes.

#### Site 70 - Research, Testing, and Evaluation Area

Bob Schilling of Bechtel National, Inc. met the RAB Tour at Site 70 and presented the site location and boundary and facility history with the use of visual aids.

Question: How was the size of the plume at Site 40 delineated?

Answer: The sampling scheme starts at the source and then extends out in all directions until non-detection is reached. Initially, Hydropunch groundwater samples are taken, and then groundwater monitoring wells are installed for periodic groundwater collection.

Question: The underground groundwater system is not connected?

Answer: No, there are different types of soils layered upon one another.

Question: What is the vertical scale on the three-dimensional plot?

Answer: I am not sure, but I believe the bottom is truncated at approximately 150 to 170 feet below ground surface (bgs).

Question: In what direction is the plume moving?

Answer: Southeast.

Question: Are the buildings on site still in use?

Answer: Yes, they are currently used by the Navy for light industrial purposes.

Question: Is the plume moving towards the ocean?

Answer: The plume is moving somewhat toward the NWR.

Question: Where is Navy Well #2 with respect to the plume?

Answer: It is located southeast of Site 1.

Question: How many feet southeast of this site is the well located?

Answer: 600 feet or more.

Question: Are there any City wells located in this area?

Answer: No.

Question: Are the City wells located across Westminster Avenue?

Answer: Yes, east towards Bolsa Chica Road.

Question: How do we know that there aren't any other holes in the clay layer?

Answer: We cannot know for certain.

Question: Have you punched holes in the bottom of the second clay layer to determine if the contamination has traveled there?

Answer: No, we stopped because, at the top of the clay layer, contaminant concentrations were either nondetectable or very close to it. To punch a hole in the second clay layer is not good idea because it would provide a contaminant pathway through this natural barrier.

Question: Is it possible that an earthquake could liquefy the second clay layer and allow the plume to spread?

Answer: Liquefaction would be much more likely in the sand layer.

Question: Is the groundwater in this area brackish or does it have a high solid particle content?

Answer: Depending upon location, the upper aquifer ranges from freshwater to brackish to saltwater.

Question: How quickly do the filtration units clog up?

Answer: The granular activated carbon filter units are tested every week. Also, the water that is filtered by the first unit is already very clean and by the time the water is filtered by the second and third units it is probably well within discharge limits.

Question: Does the Regional Water Quality Control Board have jurisdiction in this treatment process?

Answer: Yes. The Navy has an NPDES (National Discharge Pollutant Elimination Permit System) permit, issued by the RWQCB, which allows the discharge of treated water to the storm water channel.

Question: How do we know that the entire extent of the plume ends as is reported?

Answer: The sampling scheme started at the source of release, and then extended out in all directions until non-detection of contaminants was reached. Initially, Hydropunch groundwater samples were taken and then groundwater monitoring wells were installed for repeatable collection of groundwater samples.

Question: Where is the filtered water released?

Answer: The treated groundwater is released to the storm water channel.

Question: At what rate is the groundwater pumped?

Answer: The pilot test is running at about 2 ½ gallons per minute.

Question: What is the goal of the testing program?

Answer: The goal of the pilot test is to continue to sample the groundwater for TCE (trichloroethylene) and study what effect the pumping has on TCE concentrations. Then this data is compared to how the concentrations of contaminants in the other adjacent wells change over time. We are looking for a decrease in contaminants over time in the other wells.

Question: Where is the water for recharge coming from?

Answer: The quantity of water pumped out of the ground during the pilot test is small, and natural sources of recharge (from surface water percolation, rainfall infiltration, etc.) more than makes up for it.

Question: Does recharge also occur through percolation?

Answer: Yes, the irrigation of the farms and resulting percolation provide tremendous groundwater recharge.

Question: At what point does leaching from the soil contamination replenish the groundwater contaminants removed by our test?

Answer: There is not much contamination left in the soil. The contaminants are old and the soil has not held the TCE. Therefore, it is unlikely that the soil is contributing to the groundwater contamination at this point in time.

Question: Considering a full-scale operation, how long would it take to clean up the plume?

Answer: It is difficult to tell at this point. The mass of contaminants in the groundwater must be calculated first and then the available clean-up options would need to be considered.

Question: How often do the filters need to be replaced?

Answer: We should not need to replace the filters. The filters are expected to last the entire test period, which is planned for two more months.



Question: Where is the used carbon taken?

Answer: The carbon is handled as hazardous waste and disposed at a hazardous waste facility.

Question: Where was the TCE stored?

Answer: The TCE used onsite was stored in two above ground tanks (still onsite).

Question: How many gallons of TCE were involved in the contamination?

Answer: We are not sure exactly how much was released.

#### SWMU 24 - Stationary Demilitarization Furnace Facility

Adjacent Site 25 was also pointed out while at SWMU 24. A presentation to the RAB in August 1999 was announced which will discuss the investigation approach planned for Site 25 and SWMU 24.

Question: Is this site (SWMU 24) currently used for agriculture?

Answer: No, the site itself is not used for farming, just the adjacent land.

Question: What crops are grown?

Answer: I am not sure of the present crop. Sometimes they grow lima beans, but the farmers also rotate their crops.

Question: Are the crops growing on non-contaminated soil?

Answer: Yes.

Question: What is the well in the middle of the field used for?

Answer: The well is for irrigation of the agriculture fields.

#### Site 1 - Wastewater Settling Pond

Question: Is there asbestos contamination in this building?

Answer: No, it has been removed.

Question: Is this site contaminated with chromic acid?

Answer: Yes, chromic acid has contributed to the contamination of the site.

Question: Where does the Navy print Public Notices?

Answer: The Public Notice for this site removal action was published at the end of April 1999 in the Seal Beach Sun and the Orange County Register.

Question: Is the contamination migrating toward the NWR?

Answer: No, past investigations have found the contamination was limited to the soils. This makes sense given the contaminants of concern (primarily metals) and the soil types at Site 1. Metals tend to sorb on to clays, silts, and the fine-grained soils that predominate the site.

Question: Where is Well #2 located?

Answer: Well #2 is located to the southeast of Site 1.

#### Old Skeet Range

Question: What were the "clay pigeons" made of?

Answer: We have found that the "clay" pigeons probably contain polynuclear aromatic hydrocarbons, or "PAHs."

#### Site 6 - Explosives Burning Ground

No questions.

#### Site 7 - Station Landfill

Question: How deep are the disposal trenches?

Answer: They were reportedly dug to about 10 feet deep.

Question: In what direction do the trenches run?

Answer: They generally run east and west. However, the two trenches adjacent to the pond run north and south.

Question: What was disposed of in this landfill?

Answer: This site served as the landfill for the base from the mid-1950s to 1973. Therefore, almost anything that needed to be disposed of may have been buried here. Based on our investigations, we have observed predominantly domestic wastes. But some industrial wastes were reportedly disposed of at Site 7, too, including paints and solvents.

Question: Are you considering clean-up here?

Answer: Before clean-up can occur the question of the impact of the trenches on aquatic receptors in the neighboring pond must be determined. Several alternatives under consideration include: no action, capping the landfill, excavation of the buried wastes and offsite disposal, and long-term monitoring.

#### Site 4 - Oil on Roads

Question: Is this road the only remaining road that wasn't paved backed then?

Answer: In 1985, people familiar with past practices were questioned and Navy documents containing information on past practices were reviewed. Through these sources a specific set of roads were identified as oiled roads.

Question: Was this road heavily used?

Answer: It was constantly patrolled for security purposes.

#### ADJOURNMENT

The site tour was concluded at 8:00 p.m. P. Tamashiro thanked the attendees for their participation and interest.